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Characteristics of Apartments Completed: 1986

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Preliminary figures from the Survey of Market Absorption (SOMA) indicate that during 1986 approximately 408,000 unfurnished rental apartments were completed in privately financed, nonsubsidized buildings containing five units or more. This represents an increase of about 11 percent from the 364,500 units completed in 1985. Sixty-six percent of the 408,000 units were absorbed (rented) within 3 months of completion.

Two bedroom units accounted for about half (51 percent) of the new apartments while about two-fifths (42 percent) had one bedroom. Three or more bedroom apartments and efficiency apartments accounted for 3 and 4 percent of completions, respectively.

Approximately 95 percent of the unfurnished units were constructed inside metropolitan statistical areas with about the same proportion built inside central cities as were built in suburban areas. Regionally about two-fifths of total completions were built in both the South (42 percent) and West (38 percent) regions. Of the remaining units, 16 percent were built in the Midwest region and 4 percent were built in the Northeast region. Although only 4 percent of all privately financed, nonsubsidized, unfurnished units were built in the Northeast, the number of such units completed in 1986 was more than double the number in 1985 (17,000 vs. 8,200). Three month absorption rates by region ranged from 70 percent in the Midwest to 62 percent in the South.

The median rent for new unfurnished apartments completed in 1986 was $456, a 6 percent increase over the $432 median for 1985 completions. Within regions, median rent was over $500 in the Northeast, $488 in the West, $433 in the South, and $430 in the Midwest.

The data are based on a sample survey and consequently the figures cited above are subject to sampling variability. Sampling errors (i.e., standard errors) for these figures can be calculated using tables A and B.[1] These standard errors imply that there are about 2 chances out of 3 that a complete count would be contained in the interval around the estimate defined by the standard error.

A total of 550,200 apartments were completed in buildings with five units or more in 1986, which was not significantly different from the 533,300 similar units completed in 1985. Seventy-four percent were unfurnished rental units. The number of cooperative and condominium units completed in 1986 was 101,100. They accounted for 18 percent of total completions, down from 25 percent of total completions in 1985. The median asking price for condominium units completed in 1986 was $94,300. About 41 percent of new cooperative and condominium units were built in the South, 28 percent in the Northeast, 23 percent in the West, and only 8 percent in the Midwest. The 3-month absorption rate for these units was 91

[1]See reliability of estimates on page 2.

Table 1. **Unfurnished Apartments Completed During 1986 and Percent Absorbed Within 3 Months**

(Privately financed, nonsubsidized, unfurnished apartments in buildings with 5 units or more. Data regarding asking rent are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

Rent class	Total		Northeast		Midwest		South		West	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	408,000	66	17,000	70	64,100	70	171,700	62	155,100	68
Less than $300	30,600	70	3,500	69	7,900	75	14,900	70	4,300	65
$300 to $349	34,300	71	600	57	7,500	84	15,100	64	11,200	74
$350 to $399	67,100	64	(Z)	(Z)	11,700	64	35,600	64	19,700	64
$400 to $449	64,300	65	400	37	8,200	68	31,200	63	24,500	67
$450 to $499	61,600	64	1,000	68	7,700	71	29,600	61	23,300	64
$500 or more	150,200	66	11,600	72	21,000	67	45,400	60	72,200	69
Median rent	$456	(X)	$500 +	(X)	$430	(X)	$433	(X)	$488	(X)

X Not applicable. Z Indicates less than 50 or less than one-half percent.

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percent in the Northeast, considerably higher than the 3-month rate in the three other regions which were about the same in the upper 60 percent range.

Furnished rental units accounted for 2 percent of the total number of privately financed apartments in 1986. The survey shows that a furnished unit is likely to be smaller than an unfurnished one, i.e., two or more bedroom apartments accounted for about 54 percent of unfurnished units and only about 27 percent of furnished units. The median rent was lower for furnished rental units ($357) than for unfurnished units ($456).

Federally subsidized properties accounted for 4 percent of total units completed in 1986. These units were built under the following programs of the Department of Housing and Urban Development: Low Income Housing Assistance (Section 8), Senior Citizens Housing Direct Loans (Section 202), and all units in buildings containing apartments in the FHA rent supplement program.The remaining 1 percent of all units are excluded from the survey and include time-sharing units, continuing care retirement units, and turnkey housing (privately built for and sold to local public housing authorities subsequent to completion). The data on privately financed units include privately owned housing subsidized by State and local governments.

SAMPLE DESIGN

The Survey of Market Absorption (SOMA) is designed to provide data concerning the rate at which nonsubsidized and unfurnished privately financed units in buildings with five or more units are rented or absorbed. In addition, data on characteristics of the units, such as rent and number of bedrooms, are collected.

The buildings selected for SOMA are those included in the Census Bureau's Survey of Construction (SOC)[2]. For this survey the United States is first divided into primary sampling units (PSU's) which are sampled on the basis of population. Next, a sample of permit-issuing places is selected within each sample PSU. Finally, all buildings within sampled places with five or more units as well as a subsample of buildings with one to four units are selected.

Each quarter a sample of buildings with five or more housing units in the SOC sample reported as completed during that quarter come into sample for SOMA. Buildings completed in nonpermit-issuing areas are excluded from consideration. Information on the proportion of units absorbed 3, 6, 9, and 12 months after completion is obtained for units in buildings selected in a given quarter in each of the next four quarters.

ESTIMATION

Unbiased quarterly estimates are formed by multiplying the counts for each building by its base weight (the inverse of its probability of selection) and then summing over all buildings. The final estimate is then obtained by multiplying the unbiased estimate by the following ratio estimate factor:

$$\frac{\text{total units in 5+ buildings in permit-issuing areas as estimated by the SOC for that quarter}}{\text{total units in 5+ buildings as estimated by SOMA for that quarter}}$$

This procedure produces estimates of the units completed in a given quarter which are consistent with the published figures from the Housing Completions Series,[3] and also reduces, to some extent, the sampling variability of the estimates of totals. Annual estimates are obtained by summing the four quarterly final estimates.

It is assumed that the absorption rates and other characteristics of units not included in the interviewed group or not accounted for are identical to rates for units where data were obtained. The noninterviewed and not accounted for cases constitute less than 2 percent of the sample housing units in this survey.

RELIABILITY OF THE ESTIMATES

There are two types of possible errors associated with data from sample surveys: sampling and nonsampling errors. The following is a description of the sampling and nonsampling errors associated with SOMA.

Nonsampling Errors

In general, nonsampling errors can be attributed to many sources: inability to obtain information about all cases, definitional difficulties, differences in the interpretation of questions, inability or unwillingness to provide correct information on the part of respondents, mistakes in recording or coding the data, and other errors of collection, response, processing, coverage, and estimation for missing data.

Sampling Errors

The particular sample used for this survey is one of a large number of possible samples of the same size that could have been selected using the same sample design. Even if the same questionnaires, instructions, and interviewers were used, estimates from each of the different samples would differ from each other. The deviation of a sample estimate from the average of all possible samples is defined as the sampling error. The standard error of a survey estimate attempts to provide a measure of this

[2]See "Housing Starts," Construction Reports, Series C20, for details of this survey.

[3]See "Housing Completions," Construction Reports, Series C22.

variation among the estimates from the possible samples and, thus, is a measure of the precision with which an estimate from a sample approximates the average result of all possible samples.

As calculated for this survey, the standard error also partially measures the variation in the estimates due to response and interviewer errors (nonsampling errors), but it does not measure, as such, any systematic biases in the data. Therefore, the accuracy of the estimates depends on both the sampling and nonsampling error, measured by the standard error, biases, and some additional nonsampling errors not measured by the standard error.

The sample estimate and its estimated standard error enable the user to construct confidence intervals, ranges that would include the average result of all possible samples with a known probability. For example, if all possible samples were selected, each of these were surveyed under essentially the same general conditions, and an estimate and its estimated standard error were calculated from each sample, then:

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples.

2. Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples.

3. Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

For very small estimates the lower limit of the confidence interval may be negative. In this case, a better approximation to the true interval estimate can be achieved by restricting the interval estimate to positive values, that is, by changing the lower limit of the interval estimate to zero.

The average result of all possible samples either is or is not contained in any particular computed interval. However, for a particular sample, one can say with specified confidence that the average result of all possible samples is included in the constructed interval.

The conclusions stated in this report are considered significant at the 90-percent confidence level.

The reliability of an estimated absorption rate (i.e., a percentage) computed by using sample data for both the numerator and denominator depends upon both the size of the rate and the size of the total on which the rate is based. Estimated rates of this kind are relatively more reliable than the corresponding estimates of the numerators of the rates, particularly if the rates are 50 percent or more.

The figures presented in tables A and B are approximations to the standard errors of various estimates shown in the report. Table A presents standard errors for estimated totals, and table B presents standard errors of estimated percents. In order to derive standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, the tables of standard errors provide an indication of the order of magnitude of the standard errors rather than the precise standard error for any specific item. Standard errors for values not shown in tables A or B can be obtained by linear interpolation.

ILLUSTRATIVE USE OF STANDARD ERROR TABLES

Table 1 of this report shows that 34,300 units completed in 1986 rented for $300 to $349. Table A shows the standard error of an estimate of this size to be approximately 4,510. The 68 percent confidence interval as shown by these data is from 29,790 to 38,810. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimate derived from all possible samples lies within the interval from 25,280 to 43,320 using twice the standard error with 95 percent confidence.

Table 1 shows the rate of absorption after 3 months for these units is 71 percent. Table B shows the standard error on a 71 percent rate on a base of 34,300 to be approximately 5.7 percent. The 68 percent confidence interval for this estimate is from 65.3 to 76.7 percent. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimate derived from all possible samples lies within the interval from 59.6 to 82.4 using twice the standard error with 95 percent confidence.

Table 2. Characteristics of Unfurnished Apartments Completed During 1986 by Inside and Outside MSA's

(Privately financed, nonsubsidized, unfurnished apartments in buildings with 5 units or more. Data regarding number of bedrooms and asking rent are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

Characteristics	Total	Percent	Inside MSA's				Outside MSA's	
			In central city		Not in central city			
			Number	Percent	Number	Percent	Number	Percent
Total	408,000	100	187,000	100	198,900	100	22,100	100
Less than $300	30,600	8	7,400	4	9,200	5	14,000	63
$300 to $349	34,300	8	18,200	10	15,500	8	600	3
$350 to $399	67,100	16	35,500	19	28,700	14	2,900	13
$400 to $449	64,300	16	33,800	18	26,700	13	3,800	17
$450 to $499	61,600	15	28,800	15	31,900	16	900	4
$500 or more	150,200	37	63,200	34	87,000	44	(Z)	(Z)
Median rent	$456	(X)	$448	(X)	$480	(X)	$300-	(X)
No bedroom	14,400	4	9,100	5	3,900	2	1,400	6
Less than $300	4,200	1	2,000	1	900	(Z)	1,200	5
$300 to $349	1,900	(Z)	1,200	1	500	(Z)	200	1
$350 to $399	2,500	1	1,900	1	600	(Z)	(Z)	(Z)
$400 to $449	500	(Z)	300	(Z)	300	(Z)	(Z)	(Z)
$450 to $499	1,400	(Z)	1,200	1	100	(Z)	(Z)	(Z)
$500 or more	3,900	1	2,500	1	1,400	1	(Z)	(Z)
Median rent	$372	(X)	$385	(X)	$389	(X)	$300-	(X)
1 bedroom	171,900	42	83,000	44	81,300	41	7,700	35
Less than $300	16,700	4	4,600	2	6,200	3	5,800	26
$300 to $349	20,800	5	12,400	7	8,100	4	300	1
$350 to $399	44,200	11	24,400	13	18,300	9	1,500	7
$400 to $449	31,600	8	15,000	8	16,500	8	(Z)	(Z)
$450 to $499	20,000	5	9,500	5	10,500	5	(Z)	(Z)
$500 or more	38,700	9	17,100	9	21,600	11	(Z)	(Z)
Median rent	$407	(X)	$401	(X)	$424	(X)	$300-	(X)
2 bedrooms	209,100	51	89,400	48	106,900	54	12,900	58
Less than $300	9,500	2	800	(Z)	2,000	1	6,700	30
$300 to $349	11,600	3	4,600	2	6,900	3	100	(Z)
$350 to $399	20,200	5	9,200	5	9,700	5	1,400	6
$400 to $449	31,100	8	18,000	10	9,300	5	3,800	17
$450 to $499	38,200	9	17,100	9	20,200	10	800	4
$500 to $549	31,100	8	12,200	7	18,900	10	(Z)	(Z)
$550 or more	67,400	17	27,500	15	39,900	20	(Z)	(Z)
Median rent	$492	(X)	$485	(X)	$514	(X)	$300-	(X)
3 bedrooms or more	12,600	3	5,500	3	6,900	3	200	1
Less than $300	200	(Z)	100	(Z)	(Z)	(Z)	200	1
$300 to $349	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
$350 to $399	200	(Z)	100	(Z)	100	(Z)	(Z)	(Z)
$400 to $449	1,000	(Z)	500	(Z)	500	(Z)	(Z)	(Z)
$450 to $499	2,000	(Z)	900	(Z)	1,100	1	(Z)	(Z)
$500 to $549	1,400	(Z)	500	(Z)	900	(Z)	(Z)	(Z)
$550 or more	7,700	2	3,400	2	4,200	2	(Z)	(Z)
Median rent	$550+	(X)	$550+	(X)	$550+	(X)	$300-	(X)

X Not available. Z Indicates less than 50 or less than one-half percent.

Table 3. **Characteristics of Unfurnished Apartments Completed During 1986, by Region**

(Privately financed, nonsubsidized, unfurnished apartments in buildings with 5 units or more. Data regarding number of bedrooms and asking rent are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

Characteristics	Total		Northeast		Midwest		South		West	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	408,000	100	17,000	100	64,100	100	171,700	100	155,100	100
Less than $300	30,600	8	3,500	21	7,900	12	14,900	9	4,300	3
$300 to $349	34,300	8	600	4	7,500	12	15,100	9	11,200	7
$350 to $399	67,100	16	(Z)	(Z)	11,700	18	35,600	21	19,700	13
$400 to $449	64,300	16	400	2	8,200	13	31,200	18	24,500	16
$450 to $499	61,600	15	1,000	6	7,700	12	29,600	17	23,300	15
$500 or more	150,200	37	11,600	68	21,000	33	45,400	26	72,200	47
Median rent	$456	(X)	$500+	(X)	$430	(X)	$433	(X)	$488	(X)
No bedroom	14,400	4	1,100	6	2,400	4	6,600	4	4,400	3
Less than $300	4,200	1	(Z)	(Z)	1,400	2	2,300	1	500	(Z)
$300 to $349	1,900	(Z)	(Z)	(Z)	300	(Z)	800	(Z)	900	1
$350 to $399	2,500	1	(Z)	(Z)	100	(Z)	1,600	1	700	(Z)
$400 to $449	500	(Z)	(Z)	(Z)	(Z)	(Z)	300	(Z)	200	(Z)
$450 to $499	1,400	(Z)	(Z)	(Z)	(Z)	(Z)	1,100	1	300	(Z)
$500 or more	3,900	1	1,100	6	600	1	400	(Z)	1,800	1
Median rent	$372	(X)	$500+	(X)	$300-	(X)	$356	(X)	$425	(X)
1 bedroom	171,900	42	9,200	54	24,700	39	81,200	47	56,800	37
Less than $300	16,700	4	2,400	14	3,100	5	8,400	5	2,700	2
$300 to $349	20,800	5	(Z)	(Z)	4,900	8	10,300	6	5,600	4
$350 to $399	44,200	11	(Z)	(Z)	7,100	11	24,200	14	12,800	8
$400 to $449	31,600	8	400	2	3,200	5	18,800	11	9,200	6
$450 to $499	20,000	5	600	4	1,500	2	10,600	6	7,300	5
$500 or more	38,700	9	5,900	35	4,900	8	8,800	5	19,200	12
Median rent	$407	(X)	$500+	(X)	$381	(X)	$395	(X)	$439	(X)
2 bedrooms	209,100	51	6,400	38	34,200	53	79,400	46	89,000	57
Less than $300	9,500	2	1,100	6	3,300	5	4,100	2	1,000	1
$300 to $349	11,600	3	600	4	2,400	4	4,000	2	4,700	3
$350 to $399	20,200	5	(Z)	(Z)	4,500	7	9,700	6	6,100	4
$400 to $449	31,100	8	(Z)	(Z)	4,600	7	11,700	7	14,800	10
$450 to $499	38,200	9	400	2	5,900	9	16,700	10	15,100	10
$500 to $549	31,100	8	700	4	4,100	6	14,900	9	11,300	7
$550 or more	67,400	17	3,700	22	9,500	15	18,300	11	36,000	23
Median rent	$492	(X)	$550+	(X)	$470	(X)	$480	(X)	$512	(X)
3 bedrooms or more	12,600	3	200	1	2,800	4	4,600	3	4,900	3
Less than $300	200	(Z)	100	1	200	(Z)	(Z)	(Z)	(Z)	(Z)
$300 to $349	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
$350 to $399	200	(Z)	(Z)	(Z)	(Z)	(Z)	100	(Z)	100	(Z)
$400 to $449	1,000	(Z)	(Z)	(Z)	400	1	300	(Z)	400	(Z)
$450 to $499	2,000	(Z)	(Z)	(Z)	300	(Z)	1,200	1	500	(Z)
$500 to $549	1,400	(Z)	(Z)	(Z)	100	(Z)	700	(Z)	600	(Z)
$550 or more	7,700	2	200	1	1,900	3	2,300	1	3,400	2
Median rent	$550+	(X)	$550+	(X)	$550+	(X)	$549	(X)	$550+	(X)

X Not available. Z Indicates less than 50 or less than one-half percent.

Table 4. Furnished Apartments Completed During 1986

(Privately financed, nonsubsidized, furnished apartments in buildings with 5 units or more. Data regarding number of bedrooms and asking rent are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

Characteristics	Number	Percent	Percent absorbed within 3 months
Total	11,600	100	70
RENT CLASS			
Less than $300	3,100	27	68
$300 to $349	2,400	21	71
$350 to $399	2,000	17	63
$400 to $449	1,000	9	50
$450 to $499	800	7	70
$500 or more	2,200	19	86
Median rent	$357	(X)	(X)
BEDROOMS			
None	3,500	30	54
1 bedroom	4,900	42	73
2 bedrooms	2,200	19	83
3 bedrooms or more	900	8	82

X Not applicable.

Table 5. Cooperative and Condominium Apartments Completed During 1986 and Percent Absorbed Within 3 Months

(Privately financed, nonsubsidized apartments in buildings with 5 units or more. Data regarding number of bedrooms are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding.)

Characteristics	Number	Percent	Percent absorbed within 3 months
Total	101,100	100	73
BEDROOMS			
None	3,400	3	59
1 bedroom	19,200	19	78
2 bedrooms	67,500	67	75
3 bedrooms or more	10,900	11	62
REGION			
Northeast	28,500	28	91
Midwest	7,800	8	69
South	41,700	41	66
West	23,200	23	68

Table 6. Characteristics of Condominium Apartments Completed During 1986 and Sold Within 3 Months

(Privately financed, nonsubsidized, apartments in buildings with 5 units or more. Data regarding number of bedrooms and asking price are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

Item	Number	Percent	Percent absorbed within 3 months
Total	98,400	100	73
PRICE CLASS			
Less than $40,000	1,600	2	90
$40,000 to $49,999	5,700	6	67
$50,000 to $74,999	21,500	22	72
$75,000 to $99,999	26,500	27	77
$100,000 or more	43,100	44	70
Median asking price	$94,300	(X)	(X)
NUMBER OF BEDROOMS			
Less than 2	20,800	21	73
2	66,800	68	75
3 or more	10,800	11	62

X Not applicable.

Table A. **Standard Error of Estimated Totals: January to December 1986 Completions**

(1 standard error)

Estimated total	Standard error	Estimated total	Standard error
5,000	1,710	75,000	6,807
10,000	2,420	100,000	7,920
15,000	2,970	150,000	9,890
20,000	3,430	250,000	13,230
25,000	3,850	350,000	16,180
35,000	4,560	450,000	18,930
50,000	5,500	600,000	22,820

Table B. **Standard Error of Estimated Percentages: January to December 1986 Completions**

(1 standard error)

Base of percentage	Estimated percentage					
	98 or 2	95 or 5	90 or 10	80 or 20	75 or 25	50
5,000	4.8	7.5	10.2	13.6	14.8	17.1
10,000	3.5	5.2	7.3	9.6	10.4	11.9
15,000	2.7	4.2	5.9	7.9	8.4	9.8
20,000	2.3	3.6	5.2	6.9	7.3	8.4
25,000	2.1	3.3	4.6	6.1	6.5	7.7
35,000	1.7	2.9	3.8	5.2	5.6	6.5
50,000	1.5	2.3	3.3	4.2	4.6	5.4
75,000	1.2	1.9	2.7	3.5	3.8	4.4
100,000	1.1	1.7	2.3	3.1	3.3	3.8
150,000	1.0	1.3	1.9	2.5	2.7	3.1
250,000	0.8	1.0	1.5	1.9	2.1	2.5
350,000	0.6	1.0	1.2	1.5	1.7	2.1
450,000	0.5	0.8	1.1	1.3	1.5	1.7
600,000	0.4	0.8	1.0	1.2	1.3	1.5

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